

WHAT IS CLAIMED IS:

1. A recording medium having a data structure for managing reproduction of
at least multiple reproduction path video data recorded on the recording
5 medium, comprising:

one or more management areas storing path change information, the
path change information indicating where changes in reproducing at least one
of the reproduction paths of video data are permitted.

10 2. The recording medium of claim 1, wherein the path change information
includes one or more flags associated with each reproduction path of video
data, each flag indicating whether and where a change in reproducing the
associated reproduction path of video data is permitted.

15 3. The recording medium of claim 1, wherein flags permitting a change in a
same associated reproduction path define one or more units of video data.

4. The recording medium of claim 3, further comprising:

a data area having at least the video data recorded therein, and at least
20 a portion of the video data being multiplexed on a unit of video data basis.

5. The recording medium of claim 4, wherein the reproduction paths of video

data are different camera angles of video data.

6. The recording medium of claim 3, wherein each unit of video data starts with an I-picture.

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7. The recording medium of claim 3, wherein each unit of video data starts with a closed group of pictures (GOP).

8. The recording medium of claim 1, wherein the path change information
10 includes at least one entry point map associated with each reproduction path, each entry point map identifying entry points in the video data for the associated reproduction path and including at least one flag, each flag associated with an entry point and identifying whether a change in reproduction path is permitted in relation to the entry point.

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9. The recording medium of claim 8, wherein flags permitting a change in a same associated reproduction path define one or more units of video data.

10. The recording medium of claim 9, further comprising:

20 a data area having at least the video data recorded therein, and at least a portion of the video data being multiplexed on a unit of video data basis.

11. The recording medium of claim 10 wherein the reproduction paths of video

data are different camera angles of video data.

12. The recording medium of claim 9, wherein each unit of video data starts with an I-picture.

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13. The recording medium of claim 9, wherein each unit of video data starts with a closed group of pictures (GOP).

14. The recording medium of claim 8, further comprising:

10 a data area having at least one clip file recorded therein, and each clip file including video data associated with one reproduction path.

15. The recording medium of claim 8, wherein the entry point maps are aligned in time.

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16. The recording medium of claim 8, wherein an active flag associated with an entry point indicates that changing reproduction paths is permitted after reproducing the entry point having the associated active flag.

20 17. The recording medium of claim 8, wherein an active flag associated with an entry point indicates that changing reproduction paths is permitted before reproducing the entry point having the associated active flag.

18. A method of recording a data structure for managing reproduction of at least multiple reproduction path video data on a recording medium, comprising:

recording path change information in one or more management areas of the recording medium, the path change information indicating where changes in reproducing at least one of the reproduction paths of video data are permitted.

19. A method of reproducing a data structure for managing reproduction of at least multiple reproduction path video data recorded on a recording medium, comprising:

5 reproducing path change information from one or more management areas of the recording medium, the path change information indicating where changes in reproducing at least one of the reproduction paths of video data are permitted.

20. An apparatus for recording a data structure for managing reproduction of at least multiple reproduction path video data on a recording medium, comprising:

a driver for driving an optical recording device to record data on the recording medium;

an encoder for encoding at least multiple reproduction path video data;

and

a controller for controlling the driver to record the encoded multiple reproduction path video data on the recording medium, the controller for controlling the driver to record path change information in one or more management areas of the recording medium, the path change information
5 indicating where changes in reproducing at least one of the reproduction paths of video data are permitted.

21. An apparatus for reproducing a data structure for managing reproduction of at least multiple reproduction path video data recorded on a recording medium, comprising:

a driver for driving an optical reproducing device to reproduce data recorded on the recording medium;

a controller for controlling the driver to reproduce path change information from one or more management areas of the recording medium, the path change information indicating where changes in reproducing at least
10 one of the reproduction paths of video data are permitted.